

IN THE CLAIMS:

1. (Currently Amended) An illuminating unit for illuminating a target portion of an object to be illuminated, comprising:

a fiber holding portion having a fiber insert hole holding a light-emitting end portion of an optical fiber;

a lens;

a lens ~~holding portion~~ located downstream of the fiber holding portion in a light traveling direction, light emitted from a light-emitting end of the optical fiber being directed to the target portion through the lens held by the lens holding portion, wherein:

the fiber insert hole comprises an equal-diameter portion having a diameter substantially equal to a diameter of the optical fiber, and a larger-diameter portion having a larger diameter than the equal-diameter portion ~~and at an opening at on~~ one end face of the fiber holding portion, the fiber insert hole ~~holding~~ having the optical fiber extending through the equal-diameter portion; and

the lens is abutted against the one end face of the fiber holding portion or a forward end face of ~~the~~ a fusion-deformed portion of the optical fiber, the fusion-deformed portion being fitted in the larger-diameter portion and resulting from fusion deformation of a leading end portion of the optical fiber projecting from the equal-diameter portion to prevent withdrawal of the optical fiber from the fiber holding portion.

2. (Original) The illuminating unit in accordance with claim 1, wherein the larger-diameter portion is shaped to have an inner periphery clear of light that is divergently emitted from the light-emitting end of the optical fiber.

3. (Currently Amended) The illuminating unit in accordance with claim 1, wherein: the lens holding portion has a lens holding hole accommodating and holding the lens therein; and the fiber holding portion is shaped columnar having a sectional configuration the same as the lens holding hole and defining the fiber insert hole axially extending therethrough, the fiber holding portion being fitted in the lens holding hole holding the lens on a side opposite away from the target portion in a manner to abut the lens against the forward end face of the fusion-deformed portion or the one end face of the fiber holding portion.

4. (Original) The illuminating unit in accordance with claim 1, further comprising a cylindrical adapter having an inner periphery capable of fitting around the fiber holding portion without play therebetween and an outer periphery capable of fitting into the lens holding hole without play therebetween, provided the fiber holding portion has a smaller diameter than the lens holding hole.

5. (Original) The illuminating unit in accordance with claim 4, wherein the adapter is formed with a tapered surface for abutting and fixing the lens on a side closer to the target portion.

6. (Original) The illuminating unit in accordance with claim 1, further comprising an enclosure defining a plurality of discrete fiber insertion holes holding respective optical fibers,

the lens holding portion holding a plurality of lenses in a one-to-one correspondence with the optical fibers.

7. (Original) The illuminating unit in accordance with claim 6, further comprising a single second lens for refracting light rays outgoing from the respective lenses to gather the light rays onto the target portion, the second lens being located between the plurality of lenses and the target portion and having an annular shape defining a central hole extending therethrough.

8. (Original) The illuminating unit in accordance with claim 1, wherein the lens holding portion has a ring shape defining a plurality of discrete lens holding holes located circumferentially.

9. (Original) The illuminating unit in accordance with claim 1, wherein the lens held by the lens holding portion is shaped spherical.

10. (Canceled)

11. (New) An illuminating unit for directing light from a source to a target surface comprising:

an optical fiber having a first end for receiving light and a second end for releasing light;

an optical fiber holding portion having a bore extending therethrough of a first diameter for supporting the optical fiber, the bore connected to an enlarged opening of a dimension greater than the first diameter, the second end of the optical fiber having a dimension greater than the first diameter and complimentary to the enlarged opening for securing the optical fiber to the optical fiber holding portion;

a lens holding portion operatively mounted adjacent to the optical fiber holding portion; and

a lens mounted in the lens holding portion for operative contact with the second end of the optical fiber to direct any emitted light.

12. (New) The illuminating unit in accordance with Claim 11 further including a ring shaped holding member for supporting a plurality of optical fibers, optical fiber holding portions, lens holding portions and lenses that collectively provide an annular ring of light to the target surface.

13. (New) The illuminating unit in accordance with Claim 12 wherein the annular ring of light is angled inward towards an optical axis of the illuminating unit.

14. (New) The illuminating unit in accordance with claim 11 wherein the lens holding portion includes a body having a bore of a dimension to support and hold the lens and support and hold the optical fiber holding portion operatively adjacent to the lens.